

**BALDOR® • RELIANCE** 

**Product Information Packet**

**EM3710T-5G**

**7.5HP, 1770RPM, 3PH, 60HZ, 213T, 3738M, TEFC, F**

| Part Detail |        |             |            |             |        |               |            |
|-------------|--------|-------------|------------|-------------|--------|---------------|------------|
| Revision:   | M      | Status:     | PRD/A      | Change #:   |        | Proprietary:  | No         |
| Type:       | AC     | Elec. Spec: | 37WGR907   | CD Diagram: | CD0006 | Mfg Plant:    |            |
| Mech. Spec: | 37J838 | Layout:     | 37LYJ838   | Poles:      | 04     | Created Date: | 12-07-2015 |
| Base:       | RG     | Eff. Date:  | 04-11-2022 | Leads:      | 3#14   |               |            |

| Specs                           |                         |                                |                       |
|---------------------------------|-------------------------|--------------------------------|-----------------------|
| Catalog Number:                 | EM3710T-5G              | Inverter Code:                 | Inverter Ready        |
| Enclosure:                      | TEFC                    | KVA Code:                      | J                     |
| Frame:                          | 213T                    | Lifting Lugs:                  | Standard Lifting Lugs |
| Frame Material:                 | Steel                   | Locked Bearing Indicator:      | Locked Bearing        |
| Output @ Frequency:             | 7.500 HP @ 60 HZ        | Motor Lead Quantity/Wire Size: | 3 @ 14 AWG            |
| Synchronous Speed @ Frequency:  | 1800 RPM @ 60 HZ        | Motor Lead Exit:               | Ko Box                |
| Voltage @ Frequency:            | 575.0 V @ 60 HZ         | Motor Lead Termination:        | Flying Leads          |
| XP Class and Group:             | None                    | Motor Type:                    | 3738M                 |
| XP Division:                    | Not Applicable          | Mounting Arrangement:          | F1                    |
| Agency Approvals:               | CSA                     | Power Factor:                  | 82                    |
|                                 | CSA EEV                 | Product Family:                | General Purpose       |
|                                 | UR                      | Pulley End Bearing Type:       | Ball                  |
| Auxillary Box:                  | No Auxillary Box        | Pulley Face Code:              | Standard              |
| Auxillary Box Lead Termination: | None                    | Pulley Shaft Indicator:        | Standard              |
| Base Indicator:                 | Rigid                   | Rodent Screen:                 | None                  |
| Bearing Grease Type:            | Polyrex EM (-20F +300F) | RoHS Status:                   | ROHS COMPLIANT        |
| Blower:                         | None                    | Shaft Extension Location:      | Pulley End            |
| Current @ Voltage:              | 7.600 A @ 575.0 V       | Shaft Ground Indicator:        | Shaft Grounding       |

|                                       |                           |                                    |                     |
|---------------------------------------|---------------------------|------------------------------------|---------------------|
| <b>Design Code:</b>                   | A                         | <b>Shaft Rotation:</b>             | Reversible          |
| <b>Drip Cover:</b>                    | No Drip Cover             | <b>Shaft Slinger Indicator:</b>    | No Slinger          |
| <b>Duty Rating:</b>                   | CONT                      | <b>Speed Code:</b>                 | Single Speed        |
| <b>Electrically Isolated Bearing:</b> | Not Electrically Isolated | <b>Motor Standards:</b>            | NEMA                |
| <b>Feedback Device:</b>               | NO FEEDBACK               | <b>Starting Method:</b>            | Direct on line      |
| <b>Front Face Code:</b>               | Standard                  | <b>Thermal Device - Bearing:</b>   | None                |
| <b>Front Shaft Indicator:</b>         | None                      | <b>Thermal Device - Winding:</b>   | None                |
| <b>Heater Indicator:</b>              | No Heater                 | <b>Vibration Sensor Indicator:</b> | No Vibration Sensor |
| <b>Insulation Class:</b>              | H                         | <b>Winding Thermal 1:</b>          | None                |
|                                       |                           | <b>Winding Thermal 2:</b>          | None                |

|  |              |  |             |    |                       |      |  |           |           |   |
|--|--------------|--|-------------|----|-----------------------|------|--|-----------|-----------|---|
| <b>Nameplate NP3441L</b>                                 |              |  |             |    |                       |      |  |           |           |   |
| <b>CAT.NO.</b>   | EM3710T-5G   |  |             |    |                       |      |  |           |           |   |
| <b>SPEC.</b>   | 37J838R907G1 |  |             |    |                       |      |  |           |           |   |
| <b>HP</b>  | 7.5          |  |             |    |                       |      |  |           |           |   |
| <b>VOLTS</b>   | 575          |  |             |    |                       |      |  |           |           |   |
| <b>AMP</b>   | 7.6          |  |             |    |                       |      |  |           |           |   |
| <b>RPM</b>   | 1770         |  |             |    |                       |      |  |           |           |   |
| <b>FRAME</b>   | 213T         |  |             |    | <b>HZ</b>             | 60   |  |           | <b>PH</b> | 3 |
| <b>SER.F.</b>  | 1.15         |  | <b>CODE</b> | J  | <b>DES</b>            | A    |  | <b>CL</b> | H         |   |
| <b>NEMA-NOM-EFF</b>                                      | 91.7         |  | <b>PF</b>   | 82 |                       |      |  |           |           |   |
| <b>RATING</b>  | 40C AMB-CONT |  |             |    |                       |      |  |           |           |   |
| <b>CC</b>  | 010A         |  |             |    | <b>USABLE AT 208V</b> |      |  |           |           |   |
| <b>DE</b>  | 6307         |  |             |    | <b>ODE</b>            | 6206 |  |           |           |   |
| <b>ENCL</b>  | TEFC         |  | <b>SN</b>   |    |                       |      |  |           |           |   |
| <b>VPWM INVERTER READY</b><br>CT6-60H(10:1)VT3-60H(20:1) |              |  |             |    |                       |      |  |           |           |   |
|  |              |  |             |    |                       |      |  |           |           |   |

| Parts List  |  |          |
|-------------|--|----------|
| Part Number | Description                              | Quantity |
| SA311550    | SA 37J838R907G1                          | 1.000 EA |
| RA298977    | RA 37J838R907G1                          | 1.000 EA |
| 37FN3002C01 | EXFN, PLASTIC, 6.00 OD, 1.155 ID         | 1.000 EA |
| HW3200A01   | 3/8-16X3/4 I-BLT WELDED F/S              | 1.000 EA |
| 37CB3006    | 37 CB CASTING W/1.38 LEAD HOLE @ 6:00    | 1.000 EA |
| 37GS1000SP  | GASKET, CONDUIT BOX STD., .06 THICK LEXI | 1.000 EA |
| 51XW2520A12 | .25-20 X .75, TAPTITE II, HEX WSHR SLTD  | 2.000 EA |
| 11XW1032G06 | 10-32 X .38, TAPTITE II, HEX WSHR SLTD U | 1.000 EA |
| 37EP3101A01 | FR ENDPLATE, FOR ROUTING PURPOSES        | 1.000 EA |
| HW4500A01   | 1641B(ALEMITE)400 UNIV, GREASE FITT      | 1.000 EA |
| HW5100A06   | W2420-025 WVY WSHR (WB)                  | 1.000 EA |
| 37EP3100B06 | PU EP 307 LOCK BRG,GRSR,DRAIN,2 RET HLS  | 1.000 EA |
| 10XN2520A28 | 1/4-20X 1 3/4 HEX HD                     | 4.000 EA |
| HW1001A25   | LOCKWASHER 1/4, ZINC PLT .493 OD, .255 I | 4.000 EA |
| HW4500A01   | 1641B(ALEMITE)400 UNIV, GREASE FITT      | 1.000 EA |
| XY3118A12   | 5/16-18 HEX NUT DIRECTIONAL SERRATION    | 4.000 EA |
| 07FH4007SP  | PRIMED                                   | 1.000 EA |
| 51XW1032A06 | 10-32 X .38, TAPTITE II, HEX WSHR SLTD S | 3.000 EA |
| 37CB4516    | LIPPED LID FOR 37 FRAME NEC KOBX         | 1.000 EA |
| 37GS1008    | 37 GS FOR CB LID - LEXIDE                | 1.000 EA |
| 51XW0832A07 | 8-32 X .44, TAPTITE II, HEX WSHR SLTD SE | 4.000 EA |
| HW2501F21   | KEY, 5/16 SQ X 2.375                     | 1.000 EA |
| HA7000A02   | KEY RETAINER RING, 1 1/8 DIA, 1 3/8 DIA  | 1.000 EA |
| 85XU0407S04 | 4X1/4 U DRIVE PIN STAINLESS              | 2.000 EA |

| <b>Parts List (continued)</b> |   |                 |
|-------------------------------|---|-----------------|
| <b>Part Number</b>            | <b>Description</b>                      | <b>Quantity</b> |
| LB1115N                       | LABEL,LIFTING DEVICE (ON ROLLS)         | 1.000 EA        |
| LB1459                        | AEGIS SGR LABEL "AEGISLBL-100"          | 1.000 EA        |
| MJ1000A02                     | GREASE, MOBIL POLYREX EM - 124047       | 0.050 LB        |
| 51XB1214A20                   | 12-14X1.25 HXWSSLD SERTYB               | 1.000 EA        |
| HA3104A17                     | 5/16-18X13.250 T-BLT/OHIO               | 4.000 EA        |
| MG1000Y03                     | MUNSELL 2.53Y 6.70/ 4.60, GLOSS 20,     | 0.028 GA        |
| LB1119N                       | WARNING LABEL                           | 1.000 EA        |
| LC0006                        | CONNECTION LABEL                        | 1.000 EA        |
| NP3441L                       | ALUM SUPER-E VPWM INVERTER READY UL     | 1.000 EA        |
| 37PA1074                      | PALLET PACK GRP, PRINT BOX PK1026A06    | 1.000 EA        |
| MN416A01                      | TAG-INSTAL-MAINT no wire (2100/bx) 4/22 | 1.000 EA        |
| LB1350                        | BAR CODE LABEL FOR YORK                 | 1.000 EA        |

**AC Induction Motor Performance Data**

Record # 54305

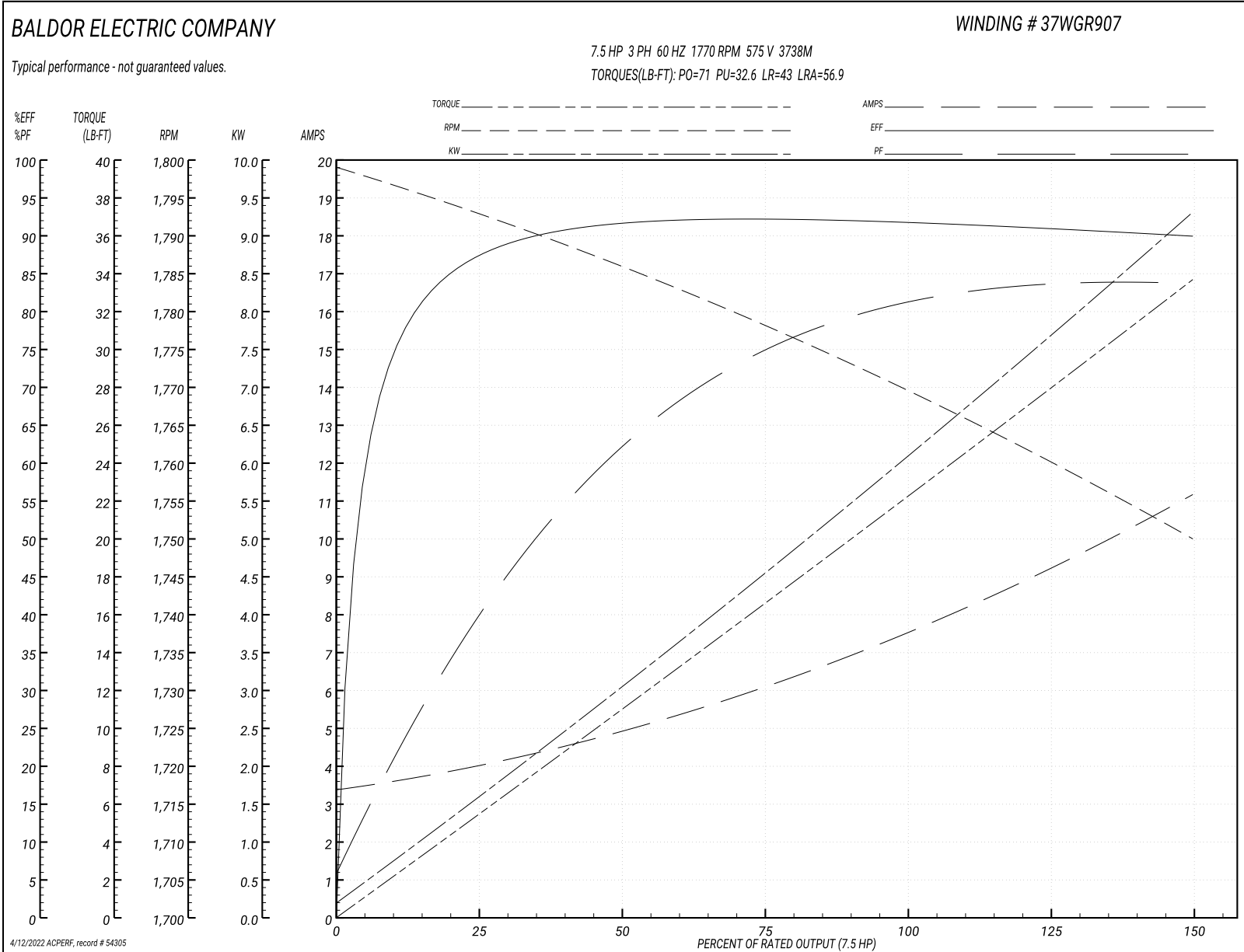
Typical performance - not guaranteed values

| <b>Winding: 37WGR907-R002</b> |                          | <b>Type: 3738M</b>               |   | <b>Enclosure: TEFC</b> |  |
|-------------------------------|--------------------------|----------------------------------|---|------------------------|--|
| <b>Nameplate Data</b>         |                          |                                  | <b>575 V, 60 Hz:<br/>Single Voltage Motor</b> |                        |  |
| <b>Rated Output (HP)</b>      | 7.5                      | <b>Full Load Torque</b>          | 22.2 LB-FT                                    |                        |  |
| <b>Volts</b>                  | 575                      | <b>Start Configuration</b>       | direct on line                                |                        |  |
| <b>Full Load Amps</b>         | 7.6                      | <b>Breakdown Torque</b>          | 71 LB-FT                                      |                        |  |
| <b>R.P.M.</b>                 | 1770                     | <b>Pull-up Torque</b>            | 32.6 LB-FT                                    |                        |  |
| <b>Hz</b>                     | 60 <b>Phase</b>          | 3                                | <b>Locked-rotor Torque</b>                    | 43 LB-FT               |  |
| <b>NEMA Design Code</b>       | A <b>KVA Code</b>        | J                                | <b>Starting Current</b>                       | 56.9 A                 |  |
| <b>Service Factor (S.F.)</b>  | 1.15                     | <b>No-load Current</b>           | 3.48 A  |                        |  |
| <b>NEMA Nom. Eff.</b>         | 91.7 <b>Power Factor</b> | 82                               | <b>Line-line Res. @ 25°C</b>                  | 2.22 Ω                 |  |
| <b>Rating - Duty</b>          | 40C AMB-CONT             | <b>Temp. Rise @ Rated Load</b>   | 63°C  |                        |  |
| <b>S.F. Amps</b>              |                          | <b>Temp. Rise @ S.F. Load</b>    | 77°C  |                        |  |
|                               |                          | <b>Locked-rotor Power Factor</b> | 37.3  |                        |  |
|                               |                          | <b>Rotor inertia</b>             | 0.934 LB-FT <sup>2</sup>                      |                        |  |

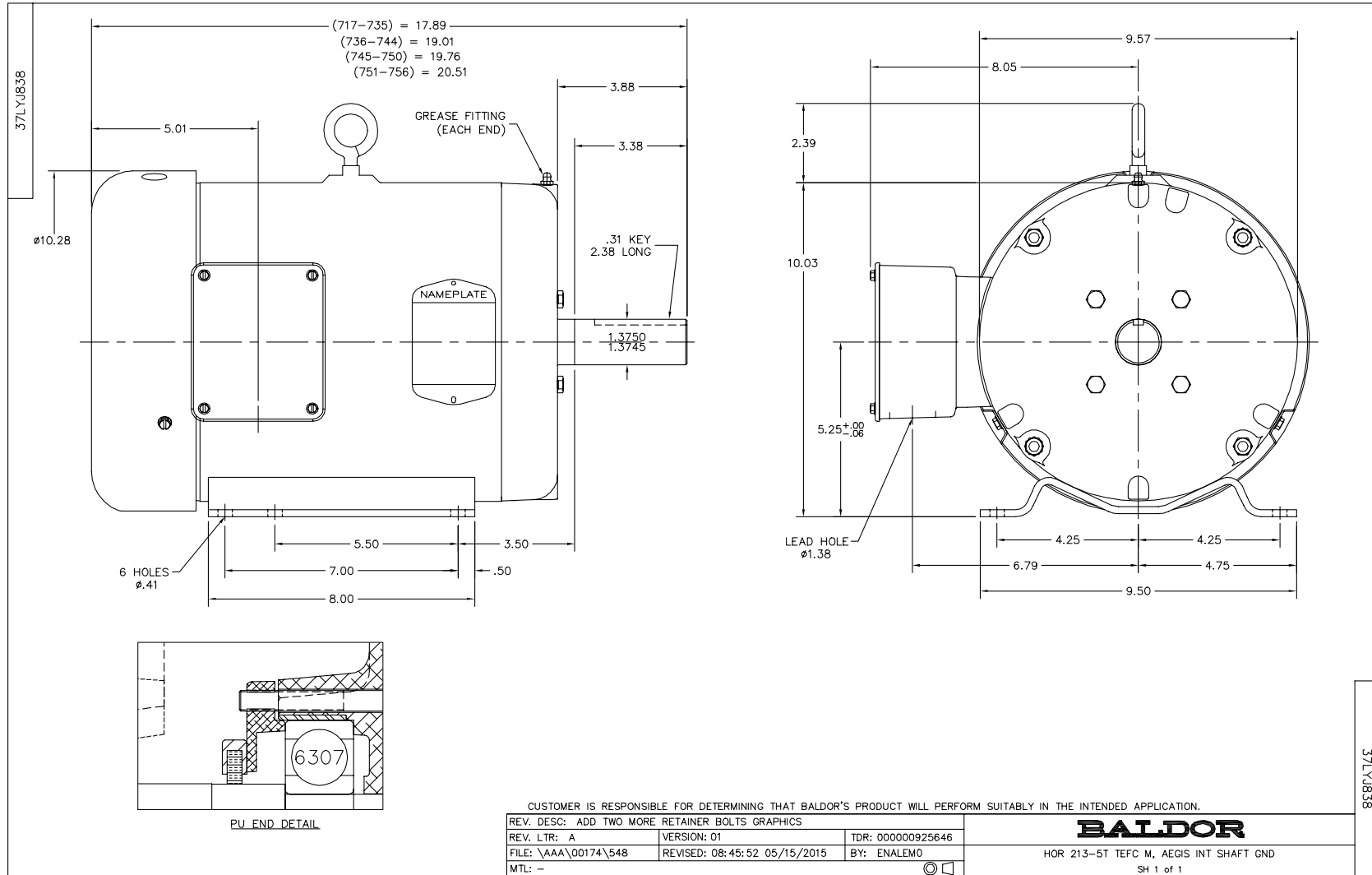
**Load Characteristics 575 V, 60 Hz, 7.5 HP**

| <b>% of Rated Load</b> | <b>25</b> | <b>50</b> | <b>75</b> | <b>100</b> | <b>125</b> | <b>150</b> | <b>S.F.</b> |
|------------------------|-----------|-----------|-----------|------------|------------|------------|-------------|
| <b>Power Factor</b>    | 42        | 63        | 75        | 80         | 83         | 84         | 82          |
| <b>Efficiency</b>      | 87.1      | 91.7      | 91.9      | 92.1       | 91         | 89.9       | 91.4        |
| <b>Speed</b>           | 1793      | 1786      | 1778      | 1770       | 1760       | 1750       | 1764        |
| <b>Line amperes</b>    | 3.9       | 4.84      | 6.1       | 7.61       | 9.29       | 11.1       | 8.62        |

Performance Graph at 575V, 60Hz, 7.5HP Typical performance - Not guaranteed values







CD0006



NOTES:

1. THREE LEAD MOTOR MAY BE EITHER WYE CONNECTED OR DELTA CONNECTED.
2. INTERCHANGE ANY TWO LINE LEADS TO REVERSE ROTATION.
3. OPTIONAL THERMOSTATS ARE PROVIDED WHEN SPECIFIED.
4. ACTUAL NUMBER OF INTERNAL PARALLEL CIRCUITS MAY VARY.
5. LEAD COLORS ARE OPTIONAL. LEADS MUST BE NUMBERED AS SHOWN.

CD0006

|                                   |                              |                   |
|-----------------------------------|------------------------------|-------------------|
| REV. DESC: ADD CLASS CONN00000007 |                              |                   |
| REV. LTR: E                       | VERSION: 01                  | TDR: 000001099922 |
| FILE: \AAA\00005\141              | REVISED: 10:24:49 02/19/2019 | BY: ENBRIRO       |
| MTL: -                            | © □                          |                   |

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3PH, SV, 3 LEADS, WYE OR DELTA CONNECTED

SH 1 of 1